

REMARKS

The Office Action rejected claim 1 under 35 U.S.C. 112 first paragraph citing the phrase “means for making electrical connection between the die contacts and the other end of the wires.” The Examiner explains that this phrase possibly includes another structural elements not described.

As now amended the cited phrase is deleted and replaced with:

wherein the other ends are arranged making electrical connections to the flattened electrical conductive balls attached to the die contacts, and wherein the other ends remain substantially parallel to the surface of the die as they make electrical connections to the flattened electrical conductive balls.

This clearly indicates the electrical connections are made to the flattened balls attached to the die contacts. This is clearly shown in FIG. 7 as originally filed.

The claims are rejected under 35 U.S.C. 102(b) as being anticipated by Shim (U.S. pat. no. 6,531,784 to Shim et al.). Specifically FIG. 9 of Shim is cited as having all the limitations of claim 1 of the present application as filed. FIG. 9 shows balls 58 with conductive wires attached. But notice that the wires depart from the ball vertically with respect to the die surface, see shim’s col. 6, line 36. The type of wire/ball bond made by Shim is limited to a vertical departure from the ball. Claim 1 as amended includes the limitation that the wires in the present invention remain substantially parallel to the die surface as they make electrical contact to the balls. The present invention relies on the simplicity of the flattened balls to provide both the spacing and the electrical connection.

Shim does not recognize this advantage.

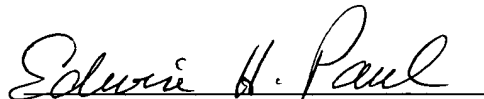
Shim uses spacers 50A and 50B in his invention along with the ball bonds 58 which are too small to provide the required spacing. In short, Shim does not realize or suggest that flattened balls can provide both functions of spacing and electrical connections.

The independent method claim 5 also includes corresponding limitations to claim 1 as now amended.

All the remaining claims depend from claims 1 and 5 are so all claims remaining in this application are allowable.

Please charge any additional fee occasioned by this paper to our Deposit Account No. 03-1237.

Respectfully submitted,



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